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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/583,922

06/20/2006

Roger Kennedy

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EXAMINER

LEUNG, JENNIFER A

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

07/07/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/583,922 | Applicant(s) KENNEDY, ROGER | |
| | Examiner JENNIFER A. LEUNG | Art Unit 1797 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2010 and 03 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,9,13,14 and 32-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,9,13,14,32-34,38 and 39 is/are allowed.
- 6) ☒ Claim(s) 36 and 37 is/are rejected.
- 7) ☒ Claim(s) 35 and 37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 11, 2010 has been entered.

Status of the Claims

2. Claims 3-8, 10-12, 15-31 are cancelled. Claims 38 and 39 are new. Claims 1, 2, 9, 13-14 and 32-39 are under consideration.

Claim Objections

3. Claim 35 is objected to because it is unclear as to the relationship between “a reaction chamber”, “a reactor inlet”, and “a regulator” of claim 35 and “a reaction chamber”, “an inlet”, and “a regulator”, respectively, as set forth in claim 1. The Examiner suggests amending the claim to read as follows:

35. (Currently amended) A process for conducting a chemical or biological reaction comprising the steps of providing the apparatus in accordance with claim 1 and supplying at least one fluid reagent to [[a]]the reaction chamber via a reactor the inlet fitted with a regulator in accordance with claim 1.

Appropriate correction is required.

4. Claim 37 is objected to because the limitation “the propeller is closer to the inlet than the outlet” is redundant. It is noted that claim 1 now sets forth “a propeller mounted in the inlet” (lines 5-6). The Examiner suggests cancelling the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 36 and 37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Regarding claim 36, it is unclear as to where the limitation “the rotation axis of the shaft extends substantially along the longitudinal axis of the reaction chamber” is supported in the specification or drawings. Claim 1, lines 9-10, sets forth that the propeller is “tilted at an angle of from between 0.5° to 60° with respect to the longitudinal axis of the inlet.” Thus, the rotation axis of the shaft is at 0.5° to 60° with respect to the longitudinal axis of the inlet. This feature, e.g., is shown in FIG. 7. In order for the rotation axis of the shaft to extend “substantially along the longitudinal axis of the reaction chamber” as claimed, the longitudinal axis of the reaction chamber would also have to extend at an angle of 0.5° to 60° with respect to the longitudinal axis of the inlet. However, there does not appear to be any support for a reaction chamber having a longitudinal axis at an angle of 0.5° to 60° relative to the longitudinal axis of its inlet.

Response to Arguments

6. Applicant's arguments filed on May 11, 2010 with respect to the rejection of claims 1, 2, 9, 13-14 and 32-37 under 35 U.S.C. 103(a) have been fully considered.

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The amendments to claims 1 and 34, which call for the propeller to be specifically “mounted in the inlet” of the reaction chamber, are considered to patentably distinguish over the prior art of record. As noted by Applicant, the prior art to Yamashita et al., Paladino and Roeckel et al. teach a propeller mounted within the reaction chamber, but each fail to disclose or adequately suggest a propeller mounted specifically in the inlet of the reaction chamber, wherein the propeller is tilted at an angle between 0.5° and 60° with respect to the axis of the inlet. Accordingly, the prior art rejections have been withdrawn.

Allowable Subject Matter

7. Claims 1, 2, 9, 13-14, 32-34, 38 and 39 are allowed. Claim 35 would be allowable upon overcoming the claim objections above.

The prior art does not disclose or adequately suggest an apparatus comprising a reaction chamber including an inlet and an outlet, wherein a regulator comprising a propeller is mounted, specifically, in the inlet of the reaction chamber or in the outlet of the reaction chamber, wherein the propeller is tilted at an angle between 0.5° and 60° with respect to the axis of the inlet. The claimed features have been illustrated, e.g., in FIG. 7 of Applicant’s disclosure. The prior art also fails to disclose or adequately suggest a process for conducting a chemical or biological reaction in which the above described apparatus is provided.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER A. LEUNG whose telephone number is (571) 272-1449. The examiner can normally be reached on 9:30 am - 5:30 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s

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supervisor, Walter D. Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer A. Leung/
Primary Examiner, Art Unit 1797